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GARBAGE GAZETTE

Connecticut Department of Environmental Protection
Solid Waste Management Unit

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INTERSTATE COOPERATION AND COORDINATION STRESSED IN NYC

Conference on Solid Waste Management and Materials Policy
February 11 - 14, 1987

This Conference may mark the beginning of formal Northeastern States' cooperation and coordination in future solid waste management. Perhaps the most important thing to come out of the conference were unanimous resolutions that:

1. Northeastern states, with the assistance of the Council of State Governments, will elect and appoint representatives to meet regularly "for the purpose of coordinating policies to better manage the solid waste generated within the region and provide growing economic opportunities for the efficient marketing and utilization of secondary materials by the private sector."

2. State and Local governments in the region "will act in concert to coordinate procurement policies that affirmatively favor the purchase of remanufactured products and products made from secondary materials where those products are reasonably price competitive and are suitable for the use for which the product was purchased and that state governments utilize their respective economic development programs and policies to expand the ability and capacity of enterprises within each state & the region to provide products made from secondary materials."

3. State governments in the region will launch comprehensive programs directed at educating and informing the general public and school systems on matters of integrated strategies for solid waste management.

4. The Conference unanimously charged that the President and Congress take immediate steps to establish a national materials policy, modified tax and regulatory structure, federal procurement policy, modification of wasteful packaging practices, and strengthened export makets for secondary materials -- all in order to benefit the Northeastern states' commitment to reduce waste generation, to recycle materials for reuse and remanufacture, and to stimulate the markets for secondary materials.

Thirty-three states and five countries were represented at this conference. Connecticut was represented by Representatives David Anderson and Mary Mushinsky of the State Legislature; Toby Goodrich and Lois Hager of DEP's Solid Waste Management Unit; and by David Birkbeck, Town of North Stonington. Representatives Anderson and Mushinsky were prominent in the passage of the resolutions. Lois Hager moderated a workshop on northeast market development, and Toby Goodrich presented a paper on measuring and predicting refuse generation.

There was a very full program of workshops. A few brief observations follow:

COMPOSITION STUDIES

Many consultants expressed an interest in Connecticut's refuse tonnage database and regard it as a particularly complete source of data. Our per capita figure for total mixed municipal waste generation (.8 TPY/person) is very close to figures arrived at in neighboring states.

William Miller, Cosulich Associates, pointed out that a thorough program to source separate and recycle will actually be expected to **increase** the BTU content of the remaining waste stream destined for waste-to-energy. He stressed the critical need to do very careful mass and energy balances in designing and sizing waste-to-energy plants. For example, higher-than expected

BTU value would reduce throughput (and cut back on expected tip fee revenues.) (Although SWMU does not disagree with this logic, we remind readers that benefits derived from reduced disposal cost through recycling might more than offset the expense to municipalities of revenue problems at a waste-to-energy plant.) Mass and energy balance variables, in Mr. Miller's opinion, must be quantified with much more care than they are today.

ENVIRONMENTAL & HEALTH RISK ASSESSMENT and WASTE-TO-ENERGY EMISSIONS

The level of interest and the complexity of detail at these workshops cannot be described fully in this newsletter. A few observations are all space allows. Conference proceedings will be published soon by conference sponsors.

Concerns are focused on acids, heavy metals, and particularly dioxin and furan emissions. There is general agreement that levels of these pollutants can be measured at waste incinerators.

There is some disagreement on health risk assessment for low levels of contaminants released to the atmosphere. In fact the complex procedures used to calculate an estimated level of risk (95% confidence level in expected cancers per one million population at maximum exposure, 24-hours/day for a seventy-year lifetime) are cause for some debate. In California, for example, a calculation for risk assessment that indicates one expected cancer per one million population at maximum lifetime exposure is "significant", which means that efforts must be made to mitigate the exposure and to justify the need to create the exposure in the first place. Any level of risk is significant, and should not be taken lightly. The question remains, how can decisions be correctly made when no waste management option is without some degree of risk; which option constitutes the least risk; and what options are there to further decrease the level of risk?

Barry Commoner, a speaker at this workshop, pointed out that there is a lack of across-the-board information on health risks associated with the different options available in solid waste management (specifically: landfill risks vs. recycling risks vs. waste-to-energy risks.) If one is to agree with consensus opinion that ultimate waste management will be a BALANCE of these approaches, and not the exclusion of any one, then one must have balanced information on associated health risks. Mr. Commoner feels that the incineration option must be eliminated entirely in favor of "total recycling."

James Binder, of Alternative Resources, Inc., reported that a study at a Montgomery County, Maryland landfill measured ambient air levels in the vicinity of the landfill. Vinyl chlorides and benzene were measured at levels exceeding those measured at waste-to-energy stacks by 1,000 to 1,000,000 times. Mr. Binder mentioned that 3 ppb vinyl chloride in ambient air represents a health risk at lifetime exposure assessment of 39/1,000,000 (39 expected cancers in 1,000,000 population at lifetime maximum exposure.) Mr. Binder also pointed out that lifetime risk of cancer in the U.S. is 250,000/1,000,000 (or one in four.)

It is very difficult to put risk assessment data in proper perspective in order to make good decisions in waste management. One must identify contaminants of concern, attempt to assess the toxicity of each contaminant, attempt to identify and assess exposure (routes, contaminant intake, and total absorbed dose), and quantify carcinogenicity and toxicology. One must calculate the relationships of emission-to-dose and of dose-to-response. One must compare assessed risks against the risks of NOT taking the proposed risk and the benefits realized having taken the risk. One must be careful that variables have not been overlooked (such as exposure of particularly sensitive segments of the population - old, young, or infirm; or pathways and exposure routes overlooked - ingestion, aspiration, dermal contact.) No one appears satisfied that we have sufficient information today.

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